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(54) Title: METHOD AND APPARATUS FOR DETERMINING HYSTERESIS
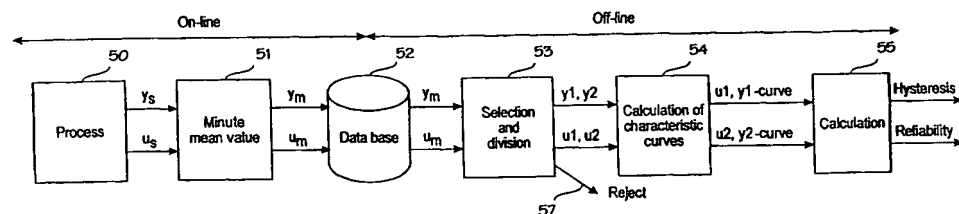
(57) **Abstract:** The invention relates to a method and a system for determining hysteresis of a process device in a process environment. The process comprises collecting (50) second-level sample data ys and us from control and measurement signals u and y of a control circuit. Minute mean values y(min) and u(min), which are stored in a database (52), are calculated from these second-level measurement values. The pairs suitable for hysteresis calculation are selected from the minute-level sample pairs um and ym according to a certain procedure. The pairs are also divided into two groups. Unsuitable pairs are rejected (57). Two characteristic curves (54) are calculated from the selected pairs (um, ym) for hysteresis calculation (55). The calculation (55) also includes a routine which evaluates the reliability of the identified hysteresis.

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